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School of Dental and Oral Surgery

1964-1965

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Columbia University in the City of New York

School of
Dental
and
Oral Surgery

1964-1965

The Faculty of Dental and Oral Surgery

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Donald G. McKay, M.D. *Delafield Professor of Pathology*

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William J. Savoy, D.D.S. *Clinical Professor of Dentistry*

Laszlo Schwartz, D.D.S. *Clinical Professor of Dentistry*

John V. Taggart, M.D. *Professor of Physiology*

Edward V. Zegarelli, D.D.S. *Edwin S. Robinson Professor of Dentistry*

Objectives of the School

Columbia University inaugurated its courses in dentistry in 1916 with the conviction that dentistry is an integral part of the health sciences and that dental education is a true university discipline. These beliefs have prevailed through the School's history and are presently reaffirmed. Many departments of the University contribute to and collaborate in the education of the dental student, thereby assuring him a broad foundation for sound professional development. The guiding educational policy of Columbia University is a constant pursuit of excellence. The primary goal of the School of Dental and Oral Surgery is the preparation of dentists who will fulfill their obligations to the individual, to society, and to the profession.

The curriculum reflects the realization that adequate preparation for dentistry demands both an understanding of biological principles and the development of clinical skills, and that each is dependent upon the other if optimal dental service is to be assured. The correlation of biological knowledge with clinical practice is reinforced throughout the program by both basic-science and clinical instruction. Emphasis is placed upon the close relationship between systemic and oral health and disease, on systemic aberrations that affect the oral structures, on diseases of the mouth which may affect other organ systems, and upon dental health as an essential to total health.

Clinical training, which is broad in scope and of great importance, is designed to produce competence in the recognition of oral disease and disorder, to develop skill in the planning and execution of treatment, to establish the concept of maintaining the oral structures in optimal health, and to stress the essential role of prevention in the control of oral disease.

Although learning plays a vital role in the student's life, his future development and attainment can be assured most effectively by fostering a spirit of inquiry. Accordingly, there is constant application of the scientific method, and both undergraduate and postgraduate students are encouraged to participate in research.

Because the population is rapidly increasing, knowledge of the processes of human growth and development and of prevention of disease and abnormality must be amplified. In medicine, prevention of disease has resulted in extensive reduction in infant and child mortality and in a marked increase in the life span of the individual. In dentistry, prevention of dental and oral disease and disorder must be effected in childhood to enable our youth to attain adulthood with complete, healthy dentitions and socially acceptable speech and expression. The increased life span presents many new physiological and pathological problems which are peculiar to the aged and are open to investigation. Programs in graduate education and research are essential if we are to meet these challenges to dentistry. The School of Dental and Oral Surgery regards high standards in both graduate education and research as prime objectives.

Foresight on the part of the founders of the School of Dental and Oral Surgery provided for the education of auxiliary personnel to augment dental health services. The program of Courses for Dental Hygienists was established in the same year that the School became part of the University. Further exploration is planned in

the use of auxiliary personnel to increase efficiency and to provide additional services for the growing population.

Columbia University has realized that to accomplish these objectives requires the selection of students with superior abilities and academic qualifications, excellent teaching, and constant pursuit of knowledge through an active and diversified research program. Conscious of these needs, the School of Dental and Oral Surgery has selected its students with care and has maintained classes of small size with a favorable ratio of students to staff. This permits individual instruction and an inspiring relationship between student and teacher. The School has, through the years, enjoyed a staff of distinguished teachers who have demonstrated accomplishment in education, research, and professional leadership. Thus, a sound background and training enable the Columbia graduate to meet the oral health requirements of the nation, to interpret the needs of the future, and to assume leadership in the various areas of professional and community activities.

► PROGRAM OF STUDY

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer

therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diagnosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give close contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

The libraries on the Morningside Heights campus, which contain some three million volumes, are open to all students. The main collection is housed in Butler Library, while special departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1964-1965 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, periodontology, and prosthodontics.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 106 Low Library, Columbia University, New York, N.Y. 10027.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York, N.Y. 10032.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers a bachelor's and a master's degree in dental hygiene. Candidates for the Bachelor of Science degree are admitted in September only under one of two classifications: Program A, for the student with two years of liberal arts college credit; Program B, for the student with two years of dental hygiene college credit. Candidates for the Master of Science degree are admitted in February or September. The program for the M.S. degree provides advanced education in dental hygiene administration, research, and teaching.

The programs are open to women students only. For further information address inquiries to the Director, Courses for Dental Hygienists, 630 West 168th Street, New York, N.Y. 10032.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. First year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhagen and staff. First year.

Lectures, conferences, and laboratory.

This course is the same as *Anatomy 101F* in the Medical School.

Anatomy 151. Gross anatomy and embryology

Professors Moss and Rogers, and staff. First year.

Regional dissections of the complete body are augmented by lectures stressing *functional* interpretations. Lectures correlate developmental anatomy with gross anatomy.

Anatomy 153. Nervous system

Professors Carpenter and Noback, and assistants. First year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss, Rankow, and Zeff. Third year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professors Gillespie and D. J. Smith. First year.

A study of the chemical constitution of natural products and of their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE

Medicine 278. General survey of medicine

Professor Cosgriff and members of the staff. Third year.

The important aspects of internal medicine, with reference to fundamentals as well as recent diagnostic and therapeutic advances. Particular emphasis is placed on over-all medical problems and their implications for dentistry.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Members of the staff. Second year.
Laboratory and conferences.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Members of the staff. Second year.

This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

OBSTETRICS AND GYNECOLOGY

Obstetrics and Gynecology 101. Genetics

Professor Orlando Miller and interdepartmental associates. First year.

ORIENTATION

Orientation 100. Orientation lectures

Members of the staff. First year.

A series of lectures for the entering student designed to acquaint him with the history and subject matter of the various areas of dentistry and to indicate their relations to the basic sciences.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professors Di Salvo and Spengeman, and staff. Third year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242 and 243. Orthodontic clinic

Professor Di Salvo and Drs. M. Gliedman and R. Gliedman. Third and fourth years.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY

Pathology 150. General and special pathology

Professor McKay and staff. Second year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Second year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Fourth year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 201. Fundamentals of pedodontics and preventive dentistry

Professor Rosenstein. Third year.

Lectures on basic aspects of pedodontics and the role of pedodontics in preventive dentistry. The several phases of dental service for children, the significance of dental service, and areas of dental service involving preventive measures. Also included is preparation for the technique course: anatomical details of primary teeth and principles of operative procedures for the primary teeth.

Pedodontics 202. Technique course

Professors Rosenstein and Nathanson and Dr. Rosenberg. Third year.

Demonstration and technique exercises in special operative procedures for compound-cavity preparation and filling, and full-crown coverage for primary teeth on technique models using newer types of cutting instruments.

Pedodontics 203. Preventive dentistry

Professor Rosenstein. Fourth year.

Lectures on the principles of prevention of dental and oral disease and disorders in children: dental caries, the common oral soft-tissue lesions, disorders of occlusion in the developing dentitions, and elimination of unfavorable habits involving the mouth. Constitutional and systemic factors (including nutrition) are included, as well as local oral factors. In each of these areas specific recommendations are made for elimination of unfavorable factors and clinical application of positive preventive measures. Pertinent literature is assigned and reviewed.

Pedodontics 204. Theory and practice of pedodontics

Professor Rosenstein. Fourth year.

Lectures and conferences on the factors involved in basic treatment planning for children and requisite background knowledge: clinical aspects of the various stages of dental development, child evaluation and management, purposes and essentials of pedodontic history taking, home care, special operative procedures involving pulp therapy for conservation of children's teeth, management of traumatized teeth, and special considerations in dental care for children with handicapping conditions.

Pedodontics 205. Pedodontics clinic

Professor Rosenstein and staff. Fourth year.

Clinical practice in management of the dental patient and application of the principles and procedures presented in the lecture courses: history taking, prophylaxis, and special operative procedures for prevention of premature loss of children's teeth. Application of knowledge of dental development, child development, and preventive dentistry is emphasized in evaluation of the child dental patient and in treatment planning.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Second year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Third year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Fourth year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Fourth year.

Continuation of *Periodontology 251* and advanced periodontal surgical techniques.

PHARMACOLOGY

Pharmacology 150. Introduction to pharmacology

The staff. Second year.

By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Nocenti and staff. First year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Third year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 103. Statistics

Professor Fertig. First year.

Lectures and demonstrations in medical statistics as related to medical research.

Public Health 222. Principles of public health

Professor Bushel and staff. Third year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Restorative Dentistry 101. Oral anatomy and occlusion

Professor Arden and staff. First year.

Lectures and demonstrations on the morphology of permanent teeth, the related tissues, and the principles of occlusion. Laboratory procedures in the reproduction of teeth in clay and wax, and articulation of all teeth on models.

Dental Materials 125, 126, and 127. Physical properties of dental materials

Professor Ayers. First, second, and third years.

Lectures and demonstrations relating the properties and functions of the restorative and accessory dental materials with the oral tissues.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. First and second years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Cain and staff. Third year.

Introduction to clinical practice. Lectures, demonstrations, and clinical practice in the application and technique of operative dentistry and endodontics.

Operative Dentistry 234. Advanced clinical practice

Professor Cain and staff. Fourth year.

A continuation of *Operative Dentistry 233* which includes further lectures and clinical experience in the special problems of operative dentistry and endodontics.

Prosthetics 104 and 105. Crown and fixed partial denture technique

Professor Arden and staff. Second year.

Lectures and demonstrations on theory and procedures in the construction of crowns and fixed partial dentures. Crowns and bridges are fabricated on models in the laboratory.

Prosthetics 157. Prosthetic technique

Professor Arden and staff. Second year.

Lectures and demonstrations on theory and procedures in the fabrication of complete dentures and removable partial dentures. Dentures are fabricated on models in the laboratory.

Prosthetics 205. Crown and fixed partial denture lectures and technique

Professor Lucca. Third year.

Lectures on the clinical procedures in crown and fixed partial dentures with practical application.

Prosthetics 206. Crown and fixed partial denture clinic

Professor Lucca and staff. Third year.

Clinical construction of elementary crown and fixed partial dentures.

Prosthetics 210. Crown and fixed partial denture lectures

Professor Lucca. Fourth year.

Lectures and conferences on various types of fixed partial dentures.

Prosthetics 211. Crown and fixed partial denture clinic

Professor Lucca and staff. Fourth year.

Clinical construction of crown and fixed partial dentures.

Prosthetics 212. Applied occluso-dynamics

Professor Lucca and guest lecturers. Third year.

Lectures, demonstrations, and technique stressing the relationship of deformities of the dentition, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Uccellani and Hindels. Third year.

Examination, classification, application of anatomical considerations, and clinical principles and procedures in complete and removable partial denture construction.

Prosthetics 261. Prosthetic clinic

Professor Uccellani and staff. Third year.

Clinical demonstrations and instruction in the construction of complete dentures.

Prosthetics 263. Prosthetic clinic

Professor Lucca and staff. Fourth year.

Clinical construction of complete and removable partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Fourth year.

A series of lectures on clinical and biological considerations in prosthodontic diagnosis, design, and construction. Half the lectures are given by guest lecturers so that other schools of thought may be presented.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Fourth year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis and Radiology 100. Diagnosis and radiology lectures

Professor Budowsky, Dr. Hendell, and staff. Second year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; radiographic technics and processing. Fundamentals of radiographic interpretation; diagnosis of pulpal diseases and associated abnormalities.

Diagnosis 200. Clinical pathological conferences

Professors Zegarelli and Kutscher and staff. Third and fourth years.

Students prepare and present case histories (from the files of the diagnosis clinic) of patients with mouth and jaw diseases which are of considerable diagnostic importance. The diagnosis and treatment of each case are discussed by and with the audience which includes third- and fourth-year students, postgraduate students, and members of the faculty.

Diagnosis 212. Diagnosis lectures and clinic

Professor Zegarelli and staff. Third year.

Lectures and discussions on diagnostic methods; demonstrations of diagnostic techniques, diseases of the maxilla and mandible, tumors of the mouth, and diseases of the soft tissues. Clinical practice in mouth examination, history-taking, diagnosis of mouth and jaw diseases, and treatment-planning.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Fourth year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatment-planning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 215. Diagnosis lectures

Professor Zegarelli and staff. Fourth year.

Lectures on focal infection; psychogenic disturbances, neurological diseases, and diseases of the maxillary sinus.

Radiology 267. Radiology clinic

Professor Budowsky, Dr. Hendell, and staff. Third year.

Clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Third year.

Lectures, conferences, and clinical experience in the application of the principles of pharmacotherapeutics to general practice. The course is specifically integrated with the lectures of *Diagnosis 212* in regard to indications for therapy, choice of drugs, modes of administration, and side reactions.

SURGERY

Surgery 168A. Pain control in dental practice

Dr. Greenfield. Second year.

Lectures and demonstrations on the clinical applications of the principles of anatomy, physiology, and pharmacology to the understanding of the pain mechanism and its alteration by psychological, chemical, and surgical methods. Management of pain with local anesthesia and supportive analgesic and psychologic methods is emphasized.

Surgery 168B. Basic exodontia

Professor Baurmash. Second year.

Lectures and demonstrations covering the evaluation, treatment plan, and preparation of the patient for the uncomplicated removal of teeth. The basic principles of tooth movement in exodontia, the related anatomy of the oral cavity, and the procedures for assurance of asepsis.

Surgery 270. Dento-alveolar surgery

Professor Friedrich. Third year.

Lectures, seminars, and clinical practice in the evaluation of the patient, the evaluation of diagnostic data, and the development of the surgical decision; the principles of flap design and the surgical management of the hard and soft tissues of the mouth; the surgical removal of teeth and the surgical procedures related to orthodontics, prosthodontics, endodontics, periodontics, and oral diagnosis.

Surgery 271. Hard- and soft-tissue trauma and dental infections

Professor Loscalzo. Third year.

An analysis of the process of dental infection; the influence of anatomic relations in the developmental pattern of infection; the surgical anatomy essential to its proper medical and surgical management; the recognition and diagnosis of fractures of the mandible and maxilla and of related facial fractures; the management of fractures involving occlusion; and clinical practice in oral surgical problems.

Surgery 272. Surgery of associated oral tissues and structures. Professor Mandel. Not given in 1964-1965.

Surgery 273. Pain control in dental practice

Dr. Greenfield. Third year.

A continuation of *Surgery 168A*, with emphasis on the alteration of the pain mechanism by the use of general anesthesia alone or in combination with analgesia and psychologic influences. Special attention is given to the problems of utilizing general anesthesia for pain and patient control in a broad scope of dental practice and to the responsibilities for competence in the prevention and management of emergencies associated with its use.

Surgery 274. Seminar in oral surgery and hospital dental practice

Professor Friedrich. Fourth year.

Problems in medical complications of oral surgical care and the basic principles and discipline of hospital dental practice. The student is expected to prepare the basic statement for the seminar.

Surgery 275. Clinical clerkship at The Roosevelt Hospital

Professors Dunn and Linz. Fourth year.

Two-week assignments of students in pairs to The Roosevelt Hospital. Supervised by the Hospital Dental Service, the students receive indoctrination in all hospital functions in an environment where the Service is a full partner in the management of routine and emergency facial and oral health problems, with specific attention to the concept of total patient care through the well-integrated team system.

Surgery 276. Clinical oral surgery practice

Professor Friedrich and staff. Fourth year.

The basic skills in the administration of local anesthesia, exodontia, and dento-alveolar surgical procedures. The clinical training correlates the basic science training with the solution of oral surgical problems.

Surgery 277. Hospital administration and practice

Professors Terenzio and Linz. Third year.

Lectures on the historic development of the hospital as a center for total health care and education, the administration of its hotel and professional functions, the development and execution of policy concerning service rendered by the hospital, and the distribution of hospital costs. The doctor's professional and legal responsibilities and the hospital discipline required to assure efficient, high-quality patient care.

THEORY AND PRACTICE OF DENTISTRY**Theory and Practice 280. Dental ethics, jurisprudence, and practice administration**

Professor Hunt. Third year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Fourth year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice-building.

Theory and Practice 283. Oral physiology

Professors Di Salvo, Schwartz, and staff. Second year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Fourth year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz and Dr. Marbach. First year

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences.

Theory and Practice 289. Dental assistant utilization

Professor O'Grady. Fourth year.

Lectures and clinical practice in the training and proper utilization of the chairside assistant under conditions simulating those of private practice. Included in its practical application are oral diagnosis, treatment planning, oral hygiene, patient education, instrument logistics, aseptic technic, and patient management in both general restorative dentistry and oral surgery.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

FIRST YEAR	<i>Hours</i>		
	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Anatomy 115ST	20	40	60
Anatomy 150FS	42	126	168
Anatomy 151FS	72	223	295
Anatomy 153T	44	44	88
Biochemistry 150ST	60	120	180
Dental Materials 125T	12		12
Obstetrics and Gynecology 101FS	27		27
Orientation 100F	12		12
Physiology 150FST	52	108	160
Public Health 103F	15		15
Restorative Dentistry 101ST		132	132
Theory and Practice 287T	12		12
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SECOND YEAR			
Dental Materials 126ST		22	22
Diagnosis and Radiology 100T	22		22
Microbiology 151* and 152F	44	88	132
Operative Dentistry 131ST	22	110†	143
Pathology 150FS	55	121	176
Pathology 246T	22	44	66
Periodontology 151T		44	44
Pharmacology 150FS	55	33	88
Prosthetics 104 and 105FS	22	154	176
Prosthetics 157ST	11	165	176
Public Health 103S	10		10
Surgery 168AS	11		11
Surgery 168BT	11		11
Theory and Practice 283FS	22		22
			<hr/> 1,099
THIRD YEAR			
Anatomy 252S	11		11
Dental Materials 127S	22		22

* Genetics included.

† For Class of 1967, 88 lab hrs.

THIRD YEAR (cont.)

Hours

	<i>Class</i>	<i>Lab/Clin</i>	<i>Total</i>
Diagnosis 200FST	16		16
Diagnosis 212FST	55	67	122
Medicine 278FST	44		44
Operative Dentistry 233FST	22	307	329
Orthodontics 241F	22	55	77
Orthodontics 242ST		10	10
Pedodontics 201 and 202T	11	11	22
Periodontology 251ST	11	86	97
Prosthetics 205S and 206FST	11	165	176
Prosthetics 212T	22		22
Prosthetics 260 and 261FST	33	165	198
Psychiatry 150S	11		11
Public Health 222T	22		22
Radiology 267F		23	23
Surgery 270, 271, and 273FST	33	63	96
Surgery 277T	11		11
Theory and Practice 280ST	22		22
Therapeutics 286FST	33		33
			<hr/> 1,364

FOURTH YEAR

Diagnosis 200FST	16		16
Diagnosis 213F		24	24
Diagnosis 215F	11		11
Operative Dentistry 234FST	22	317	339
Orthodontics 243FS		17	17
Pedodontics 203, 204, and 205FST	22	83	105
Periodontology 252FS	22		22
Periodontology 253FST		64	64
Prosthetics 210F	11		11
Prosthetics 211 and 263FST		239	239
Prosthetics 264ST	22		22
Prosthetics 265T	11	19	30
Surgery 273*, 274, and 276FST	33	50	83
Surgery 275FST			
Theory and Practice 281FS	33		33
Theory and Practice 285FST			
Theory and Practice 289FST	3	10	13
			<hr/> 1,029

* For Class of 1965 only.

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York, N.Y. 10032. Every application must be accompanied by a check or money order for \$15, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Chairman of the Committee on Admissions.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses (8 points of each): English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in chemistry, advanced courses in biology, courses in mathematics, foreign languages, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago, Illinois 60611.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$200 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

► REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 8–9, 1964. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for a valid reason, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

► FEES

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

Comprehensive fee	\$ 100.00
Tuition	1,600.00
Student health service fee	50.00

For all full-time students, per academic year (see below)

APPLICATION FEES AND LATE FEES

Application for admission	\$15.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student who is required to repeat the work for any one year must pay the full tuition and fees.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition that he has paid. Any adjustment will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The comprehensive fee, the student health service fee, application fees, late fees, and special fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2-220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be cared for either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR THE D.D.S. DEGREE

An application for the D.D.S. degree terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

► ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	<i>Average</i>	<i>Minimum</i>
Tuition and fees for a full program	\$1,750.00	\$1,750.00
Room in one of the residence halls	465.00	310.00
Board in a University dining room	600.00	550.00

The average and minimum figures for board include the approximate cost of meals not provided under the weekly board plans; holiday periods are not included (see "Housing," page 23).

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home will probably spend about \$200 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the first year, \$190; in the second year, \$200; in the third year, \$140; in the fourth year, \$30. Book lists are posted for each class during registration week. Books may be purchased from the Medical Center Bookstore on the second floor of the College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. The approximate cost of instruments for students entering in September 1964

will be \$2,500 over the four-year period: first year, \$1,000, second year, \$1,000, third year, \$500. In the fourth year, replacement of worn and broken instruments will be the only instrument expense expected. Slight variations in these figures may be necessary because of price fluctuations or new developments. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost. These are *estimates* and are subject to change. Students are asked *not* to present checks made out in advance and based upon these figures.

Microscopes. During the first and second years microscopes are provided by the School for an annual rental of \$15. If a student prefers to provide his own microscope, he must have it approved by the Department of Anatomy. It is recommended that the microscope be of standard make equipped with: (a) quadruple nose piece; (b) Abbe or variable focus condenser; (c) 4x, 10x, 43x objectives; (d) 96x oil immersion lens; (e) 10x wide field eye piece; (f) mechanical stage; (g) attached lamp; (h) carrying case. The cost of a new microscope ranges from \$460 to \$700, and of a reconditioned microscope from \$150 to \$450. Arrangements for approval and for purchase or rental should be made before registration for the opening term.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for loans and grants through the Dean's Office. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New Jersey, and New York) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. To insure an early decision, applications should be filed for the autumn term by August 15; for the spring term by December 1.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

NEW YORK STATE SCHOLAR INCENTIVE AWARDS

Any student who has been a legal resident of New York State for the preceding year is entitled to a Scholar Incentive Award for each term in which he is registered as a full-time degree candidate. The amount of this award is based upon the net taxable balance of his income and the income of those responsible for his support, as reported on the New York State income tax return for the

previous calendar year. Further information and application forms may be obtained from the Department of Education, Regents Examination and Scholarship Center, Albany, N.Y. 12201. Application for awards should be filed two months in advance of the beginning of the term for which the grant is to apply.

AWARDS AND PRIZES

Alpha Omega Scholarship Award. A plaque presented to the graduating student (not necessarily an Alpha Omegan) with the highest scholastic average for his four years of dental studies. First awarded in 1949.

American College of Dentists, New York Section. An award of \$100 and a plaque or scroll. Presented to a third-year student who is a good all-around student, a member of the student section of the American Dental Association, and who exhibits leadership.

American Society of Periodontists. A lettered parchment and one year's subscription to the *Journal of the American Society of Periodontists*, awarded to an outstanding student in periodontics. First awarded in 1964.

Dental Medicine, American Academy of. A certificate and a subscription to the *Journal of Dental Medicine*, awarded to a fourth-year student for excellence in this field.

Dentistry for Children, American Society of. A certificate, one year's membership in the Society, and one year's subscription to *The Journal of Dentistry for Children*, awarded to a fourth-year student.

Dunning, William Bailey, Award for Excellence in Periodontology. A medal awarded to the graduating student who is the most proficient in periodontology. First awarded in 1957.

Ewell, Ella Maria. A medal awarded to the graduating student who is the most proficient in some subject of dentistry.

Gold Foil Operators, American Academy of. Certificate awarded to a fourth-year student for excellence in gold foil technique.

International College of Dentists, U.S.A. Section. A plaque presented to the graduating student who has shown the most professional growth and development during his years of dental study.

Italian Dental Society Award. An award of \$100 to the third-year student who demonstrated outstanding scholarship and leadership in his first two years of study. Given by the Italian Dental Society of New York for the first time in 1964.

Operative Dentistry, Prize for Excellence in. A plaque awarded by the staff of the Section of Operative Dentistry to the graduating student who has shown the greatest proficiency in operative dentistry.

Oral Roentgenology, American Academy of. A certificate awarded to a fourth-year student for excellence in this field.

Pedodontics, Certificate for Excellence in. A plaque awarded to a graduating student for excellence in pedodontics. Established by the Class of 1929.

Psi Omega Fraternity Award. A plaque presented by the Gamma Lambda Chapter to the graduating student who has displayed exemplary professional conduct.

Rowe-Wiberg Medal. An award made by the Association of Dental Alumni to the graduating student who has shown the greatest proficiency in prosthetic dentistry.

Van Woert Scholarship Fund Prize. About \$350. Awarded to a graduating student who is high in scholastic attainment, personal character, and in potentiality of being a credit to Columbia University and the School of Dental and Oral Surgery.

Women's Auxiliary to the 11th District Dental Society. An award of \$150 to a deserving fourth-year student who is a resident of the Borough of Queens.

► HOUSING

The University provides housing for undergraduate and graduate men and women, both single and married. Inquiries about men's housing and the accommodations for married students should be directed to the Residence Halls Office, 125 Livingston Hall, Columbia University, New York, N.Y. 10027. Women students should write to the women's residence hall, Johnson Hall, 411 West 116th Street, New York, N.Y. 10027.

Rates in the graduate men's residence halls range from \$310 to \$550 for the academic year. An optional prepaid board plan is available. The cost of fifteen meals a week is \$480 for the academic year, exclusive of the Thanksgiving, Christmas, and spring holidays and the period between terms. All rates are subject to change.

In Johnson Hall, room rates for the academic year range from \$350 to \$600, with \$520 the median rate. *Note:* the few rooms available at \$350 are assigned to full-time graduate students on the basis of financial need; applications for these rooms must be accompanied by a special statement (Johnson Hall will provide the necessary form upon request). All residents are required to take breakfast and dinner at Johnson Hall seven days a week at a cost of \$425 for the academic year, exclusive of the Christmas holidays. All rates are subject to change.

Students who wish to live in furnished rooms or apartments off campus should consult the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York, N.Y. 10027, for information about the services rendered by the Registry. Single rooms in private apartments range from \$12 to \$20 a week; double rooms, from \$20 to \$25. Most apartments, when available, are in the price range of \$90 to \$150 a month.

International House, a privately owned student residence near the campus, has accommodations for about five hundred graduate students, both foreign and American. Rates for the academic year are \$425 to \$750. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of 12 points or for a program of full-time research. Inquiries should be addressed to the Committee on Admissions, International House, 500 Riverside Drive, New York, N.Y. 10027.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 percent of the members

of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which second-, third-, and fourth-year students are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

THE STUDENT DENTAL ASSOCIATION

The Student Dental Association of Columbia University was established in 1960 to provide a professional and social forum in which the entire student body would participate. The general program of this organization is patterned after the program of local dental societies in which the graduate dentist makes his contribution to the organized dental profession. The undergraduate dental student is exposed to the democratic process of organization function, policy development, and programming as he meets his responsibility for supporting the program of his association.

► REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Licensing Services, New York State Department of Education, Albany, N.Y. 12201. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry, and histology applicants who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

The scores on examinations in dentistry submitted by the Council of the National Board of Dental Examiners are now accepted by the New York State Board of Dental Examiners in lieu of its own written examinations.

Officers of Instruction

ANATOMY

CHAIRMAN: Professor Wilfred M. Copenhaver

Edmund Applebaum. *Associate Professor of Dental Anatomy*
D.D.S., New York College of Dentistry, 1922

Philip W. Brandt. *Assistant Professor of Anatomy*
A.B., Swarthmore, 1952; M.S., Pennsylvania, 1957; Ph.D., Columbia, 1960

Malcolm B. Carpenter. *Professor of Anatomy*
A.B., Columbia, 1943; M.D., Long Island, 1947

Wilfred M. Copenhaver. *Professor of Anatomy*
A.B., Western Maryland, 1921; Ph.D., Yale, 1925

Charles A. Ely. *Associate Professor of Anatomy*
A.B., Washington and Jefferson, 1936; M.S., Hawaii, 1940; Ph.D., Wisconsin, 1948

Melvin L. Moss. *Associate Professor of Anatomy*
A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954

Charles R. Noback. *Associate Professor of Anatomy*
B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942

Robin M. Rankow. *Assistant Clinical Professor of Anatomy*
D.D.S., Columbia, 1940; M.D., Rochester, 1950

William M. Rogers. *Assistant Professor of Anatomy*
B.S., Georgia, 1921; Ph.D., Cornell, 1927

S. C. Shen. *Assistant Professor of Anatomy*
B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939

George K. Smelser. *Professor of Anatomy*
A.B., Earlham, 1929; Ph.D., Chicago, 1932

ANESTHESIOLOGY

CHAIRMAN: Professor Emanuel M. Papper

Lester C. Mark. *Associate Professor of Anesthesiology*
M.D., Toronto, 1941

Emanuel M. Papper. *Professor of Anesthesiology*
A.B., Columbia, 1935; M.D., New York University, 1938

BIOCHEMISTRY

CHAIRMAN: Professor David Rittenberg

Horace B. Gillespie. *Assistant Professor of Biochemistry*
A.B., Lawrence, 1925; M.S., Illinois, 1926; Ph.D., 1930

David Rittenberg. *Professor of Biochemistry*
B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934

David J. Smith. *Assistant Professor of Biochemistry*
D.D.S., Columbia, 1944

DENTAL AND ORAL SURGERY

CHAIRMAN: Professor Gilbert P. Smith

ORAL SURGERY

DIRECTOR: Professor Rudolph H. Friedrich

Julien W. Anderson. *Assistant Clinical Professor of Dentistry*
D.D.S., Howard, 1949

Harold D. Baurmash. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1948

Theodore M. Bundrant. *Associate Clinical Professor of Dentistry*
D.D.S., Howard, 1929

Kourken A. Daglian. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

Morris Fierstein. *Clinical Professor of Dentistry*
D.D.S., Columbia, 1921

Rudolph H. Friedrich. *William Carr Professor of Oral Surgery*
D.D.S., Northwestern, 1930

Bertram Klatskin. *Assistant Clinical Professor of Dentistry*
A.B., Cornell, 1937; D.D.S., Columbia, 1941

Louis J. Loscalzo. *Associate Clinical Professor of Dentistry*
A.B., Fordham, 1942; D.D.S., Temple, 1946

Louis Mandel. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1943; D.D.S., Columbia, 1946

George A. Minervini. *Assistant Clinical Professor of Dentistry*
A.B., Columbia College, 1942; D.D.S., Columbia, 1946

Fred Rothenberg. *Assistant Clinical Professor of Dentistry*
D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937

William J. Savoy. *Clinical Professor of Dentistry*
B.S., Manhattan, 1931; D.D.S., Columbia, 1935

Seymour Zeff. *Associate Clinical Professor of Dentistry*
D.M.D., Louisville, 1944

At Grasslands Hospital:

Manuel M. Maslansky. *Associate Clinical Professor of Dentistry*
D.D.S., Columbia, 1928

At Montefiore Hospital:

David Tanchester. *Clinical Professor of Dentistry*
D.D.S., New York University, 1921

At Mt. Sinai Hospital:

Alvin S. Nathan. *Clinical Professor of Dentistry*
D.D.S., Columbia, 1926; B.S., New York University, 1935, M.A., 1938

At Roosevelt Hospital:

Clarence A. Dunn. *Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1924

Andrew M. Linz. *Assistant Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1948; M.Sc. (Dent.), 1953

Peter B. Terenzio. *Adjunct Professor of Dentistry*
L.L.B., Connecticut, 1940; M.H.A., Northwestern, 1950

ORTHODONTICS

DIRECTOR: Professor Nicholas A. Di Salvo

Jack M. Breuer. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1946; D.D.S., 1949

Charles M. Chayes. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1937; D.D.S., Columbia, 1941

Harold P. Cobin. *Assistant Clinical Professor of Dentistry*
B.S., St. John's University, 1927; D.D.S., Columbia, 1931

Nicholas A. Di Salvo. *Professor of Dentistry*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

Harry A. Galton. *Clinical Professor of Dentistry (on leave, academic year)*
D.D.S., Columbia, 1932

Francis J. Loughlin. *Associate Clinical Professor of Dentistry*
D.D.S., New York University, 1939

Joseph Luban. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1938; D.D.S., Columbia, 1942

Henry I. Nahoum. *Associate Clinical Professor of Dentistry*
A.B., Brooklyn, 1940; D.D.S., Columbia, 1943

Armand M. Oppenheimer. *Associate Clinical Professor of Dentistry*
A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

Laszlo Schwartz. *Clinical Professor of Dentistry*
B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931

Walter G. Spengeman. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1938; D.D.S., Columbia, 1941

Julius Tarshis. *Assistant Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1949

Edward E. Teltsch. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1932; D.D.S., Buffalo, 1936

Clifford L. Whitman. *Clinical Professor of Dentistry*
D.D.S., Maryland, 1927

PEDODONTICS

DIRECTOR: Professor Solomon N. Rosenstein

Jerry J. Adelson. *Assistant Clinical Professor of Dentistry*
A.B., Pennsylvania, 1944; D.D.S., New York University, 1951

Seymour Koster. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1945; D.D.S., 1949

- Bernard Nathanson. *Assistant Clinical Professor of Dentistry*
B.S., New York University, 1929; D.D.S., Columbia, 1932
- Solomon N. Rosenstein. *Professor of Dentistry*
B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- Julian Schroff. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- William A. Verlin. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1929; D.D.S., Columbia, 1931

RESTORATIVE DENTISTRY

DIRECTOR: Professor Gilbert P. Smith

- Howard A. Arden. *Associate Professor of Dentistry*
B.S., Fordham, 1943; D.D.S., Columbia, 1946
- Herbert D. Ayers, Jr. *Associate Professor of Dentistry*
A.B., Columbia, 1929; D.D.S., 1931
- James W. Benfield. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1945
- Sebastian A. Bruno. *Assistant Clinical Professor of Dentistry*
D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Frank J. Cacciola. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1948
- Edward A. Cain, Jr. *Professor of Dentistry*
B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Victor S. Caronia. *Assistant Professor of Dentistry*
D.D.S., Columbia, 1957
- Joseph C. De Lisi. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1952
- Kenneth C. Deesen. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1948
- Joseph E. Fiasconaro. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1940; D.D.S., Columbia, 1943
- Herbert P. Fritz. *Assistant Clinical Professor of Dentistry*
B.S., New York University, 1933; D.D.S., Columbia, 1936
- George W. Hindels. *Associate Clinical Professor of Dentistry*
M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1929
- Joseph M. Leavitt. *Associate Clinical Professor of Dentistry*
B.S., Oklahoma, 1936; D.D.S., Columbia, 1940
- George F. Lindig. *Associate Clinical Professor of Dentistry*
D.D.S., Minnesota, 1924
- John J. Lucca. *Professor of Dentistry*
A.B., New York University, 1941; D.D.S., Columbia, 1947

- William Miller. *Assistant Clinical Professor of Dentistry*
B.S., Columbia, 1929; D.D.S., 1931
- William J. Miller. *Associate Clinical Professor of Dentistry*
A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. *Assistant Clinical Professor of Dentistry*
B.A., New York University, 1937; D.D.S., Columbia, 1941
- George L. O'Grady. *Assistant Professor of Dentistry*
A.B., Fordham, 1929; D.D.S., Columbia, 1934
- Max A. Pleasure. *Associate Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941
- Thomas W. Portway. *Assistant Professor of Dentistry*
B.S., Fordham, 1950; D.D.S., Columbia, 1956
- Steven Scrivani. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1948
- Harold Sherman. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- Harry Shpuntoff. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1939; D.D.S., Columbia, 1943
- William H. Silverstein. *Associate Clinical Professor of Dentistry*
D.D.S., Maryland, 1937
- Gilbert P. Smith *Professor of Dentistry*
D.D.S., Minnesota, 1927
- Ennio L. Uccellani. *Assistant Professor of Dentistry*
B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948
- At Grasslands Hospital:
- Morris Eckhaus. *Associate Clinical Professor of Dentistry*
D.D.S., Columbia, 1936
- Robert E. Herlands. *Clinical Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944

STOMATOLOGY

- DIRECTOR: Professor Edward V. Zegarelli
- Lionel Abzug. *Assistant Clinical Professor of Dentistry*
A.B., Columbia, 1948; D.D.S., 1954
- Seymour Albus. *Assistant Clinical Professor of Dentistry*
A.B., Brooklyn, 1943; D.D.S., Pennsylvania, 1946
- Frank E. Beube. *Clinical Professor of Dentistry*
L.D.S., D.D.S., Toronto, 1930
- Jack Budowsky. *Associate Clinical Professor of Dentistry*
D.D.S., Columbia, 1943
- Robert E. Crowley. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1936; D.D.S., 1939
- Joseph A. Cuttita. *Associate Professor of Dentistry*
A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939

- Ida M. Golomb. *Assistant Clinical Professor of Dentistry*
A.B., New York University, 1938; D.D.S., 1945
- Robert Gottsegen. *Associate Clinical Professor of Dentistry*
A.B., Michigan, 1939; D.D.S., Columbia, 1943
- Leonard Hirschfeld. *Associate Clinical Professor of Dentistry*
A.B., Columbia, 1941; D.D.S., 1944
- Ellen N. Hosiosky. *Assistant Clinical Professor of Dentistry*
D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- Norman H. Joondeph. *Assistant Clinical Professor of Dentistry*
D.D.S., Pennsylvania, 1943
- Mortimer Karmiol. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1939; D.D.S., Columbia, 1943
- Austin H. Kutscher. *Assistant Professor of Dentistry*
B.S., New York University, 1945; D.D.S., Columbia, 1946
- John K. Lind. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1953; D.D.S., Columbia, 1957
- Irwin D. Mandel. *Associate Clinical Professor of Dentistry*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- Melvin L. Morris. *Associate Clinical Professor of Dentistry*
B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941
- Bernard S. Moskow. *Assistant Clinical Professor of Dentistry*
D.D.S., Temple, 1954; M.Sc.D., Pennsylvania, 1958
- Eugene M. Tedaldi. *Assistant Clinical Professor of Dentistry*
B.S., St. John's, 1950; D.D.S., Columbia, 1954
- Robert H. Thompson, Jr. *Assistant Clinical Professor of Dentistry*
D.D.S., Howard, 1948; M.P.H., Columbia, 1958
- Ferdinand A. Tuoti. *Associate Clinical Professor of Dentistry*
D.M.D., Harvard, 1928
- Robert Umans. *Assistant Clinical Professor of Dentistry*
D.D.S., New York University, 1939
- Robert F. Walsh. *Assistant Clinical Professor of Dentistry*
D.D.S., Columbia, 1947
- Bernard H. Wasserman. *Assistant Clinical Professor of Dentistry*
A.B., Brooklyn, 1941; D.D.S., Columbia, 1944
- David Zeisler. *Assistant Clinical Professor of Dentistry*
B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- Edward V. Zegarelli. *Edwin S. Robinson Professor of Dentistry*
A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

DERMATOLOGY

CHAIRMAN: Professor Carl T. Nelson

- Carl T. Nelson. *Professor of Dermatology*
A.B., Harvard, 1935; M.A., 1937; M.D., 1941
- Meyer H. Slatkin. *Assistant Clinical Professor of Dermatology*
B.S., College of the City of New York, 1935; M.D., Edinburgh, 1940

MEDICINE

CHAIRMAN: Professor Stanley E. Bradley

Henry Aranow, Jr. *Associate Professor of Clinical Medicine*
A.B., Harvard, 1935; M.D., Columbia, 1938

Stanley E. Bradley. *Samuel Bard Professor of Medicine*
A.B., Johns Hopkins, 1934; M.D., Maryland, 1938

Howard G. Bruenn. *Associate Clinical Professor of Medicine*
A.B., Columbia, 1925; M.D., Johns Hopkins, 1929; M.S., Columbia, 1933; Med.Sc.D., 1935

Charles L. Christian. *Associate Professor of Medicine*
A.B., Wichita, 1949; M.D., Western Reserve, 1953

Stuart W. Cosgriff. *Associate Professor of Clinical Medicine*
A.B., Holy Cross, 1938; M.D., Columbia, 1942

Richard B. Duane. *Assistant Clinical Professor of Medicine*
A.B., Princeton, 1940; M.D., Columbia, 1943

Daniel L. Larson. *Assistant Clinical Professor of Medicine*
M.D., Columbia, 1946

Edgar Leifer. *Assistant Professor of Clinical Medicine*
B.S., College of the City of New York, 1937; M.A., Columbia, 1939; Ph.D., 1941; M.D., 1946

George W. Melcher, Jr. *Assistant Professor of Clinical Medicine*
A.B., Colorado, 1943; M.D., Columbia, 1946

Kermit L. Pines. *Associate Professor of Clinical Medicine*
A.B., Columbia, 1937; M.D., 1942

Daniel Rudman. *Assistant Professor of Medicine*
B.S., Yale, 1946; M.D., 1949

Gerald M. Turino. *Assistant Professor of Medicine*
A.B., Princeton, 1945; M.D., Columbia, 1948

MICROBIOLOGY

CHAIRMAN: Professor Harry M. Rose

Sam M. Beiser. *Associate Professor of Microbiology*
B.S., College of the City of New York, 1942; Ph.D., Columbia, 1951

Paul D. Ellner. *Assistant Professor of Microbiology*
B.S., Long Island, 1949; M.S., Southern California, 1952; Ph.D., Maryland, 1956

Bernard F. Erlanger. *Associate Professor of Microbiology*
B.S., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951

Gabriel C. Godman. *Associate Professor of Microbiology*
A.B., New York University, 1941; M.D., 1944

Calderon Howe. *Professor of Microbiology*
A.B., Yale, 1938; M.D., Harvard, 1942

Elvin A. Kabat. *Professor of Microbiology*
B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937

Councilman Morgan. *Professor of Microbiology*
B.S., Harvard, 1943; M.D., Columbia, 1946

Harry M. Rose. *John E. Borne Professor of Medical and Surgical Research*
A.B., Yale, 1928; M.D., Cornell, 1932

Herbert Rosenkranz. *Assistant Professor of Microbiology*
B.S., College of the City of New York, 1954; Ph.D., Cornell, 1959

Beatrice C. Seegal. *Professor of Microbiology*
A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924

Stuart W. Tanenbaum. *Associate Professor of Microbiology*
B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

OBSTETRICS AND GYNECOLOGY

CHAIRMAN: Professor Howard C. Taylor

Orlando J. Miller. *Assistant Professor of Obstetrics and Gynecology*
B.S., Yale, 1945; M.D., 1950

Howard C. Taylor. *Professor of Obstetrics and Gynecology*
Ph.B., Yale, 1920; M.D., Columbia, 1924

PATHOLOGY

CHAIRMAN: Professor Donald G. McKay

Henry A. Azar. *Assistant Professor of Pathology*
A.B., American University of Beirut, 1948; M.D., 1952

William A. Blanc. *Associate Professor of Pathology*
B.A., Geneva, 1940; M.D., 1947; Ph.D., 1952

Lester R. Cahn. *Professor of Oral Pathology*
D.D.S., New York College of Dentistry, 1918

Raymond A. McBride. *Assistant Professor of Pathology*
B.S., Tulane, 1952; M.D., 1956

Donald G. McKay. *Delafield Professor of Pathology*
A.B., California, 1943; M.D., 1945

Luciano Ozzello. *Assistant Professor of Surgical Pathology*
M.D., Turin (Italy), 1951

Ralph M. Richart. *Assistant Professor of Pathology*
A.B., Johns Hopkins, 1954; M.D., Rochester, 1958

Stanley S. Simbonis. *Assistant Professor of Pathology*
B.S., Yale, 1953; M.D., 1957

David Spiro. *Professor of Pathology*
M.D., New York University, 1944; Ph.D., Massachusetts Institute of Technology, 1956

Alvin Volkman. *Assistant Professor of Pathology*
B.S., Union College, 1947; M.D., Buffalo, 1951

Joseph Wiener. *Assistant Professor of Pathology*
M.D., Toronto, 1953

PHARMACOLOGY

CHAIRMAN: Professor Brian F. Hoffman

Herbert J. Bartelstone. *Assistant Professor of Pharmacology*
B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1960

- Lowell M. Greenbaum. *Assistant Professor of Pharmacology*
B.S., College of the City of New York, 1949; Ph.D., Tufts, 1953
- Brian F. Hoffman. *David Hosack Professor of Pharmacology*
A.B., Princeton, 1943; M.D., Long Island, 1947
- Frederick G. Hofmann. *Associate Professor of Pharmacology*
A.B., Michigan, 1943; Ph.D., Harvard, 1952
- Wilbur H. Sawyer. *Associate Professor of Pharmacology*
M.D., Harvard, 1945; Ph.D., 1950
- Donald H. Singer. *Assistant Professor of Pharmacology*
A.B., Cornell, 1948; M.A., Stanford, 1950; M.D., Northwestern, 1954
- Hsueh-Hwa Wang. *Assistant Professor of Pharmacology*
M.D., National Central University Medical School (China), 1946
- Shih-Chun Wang. *Professor of Pharmacology*
B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

CHAIRMAN: Professor John V. Taggart

- Shu Chien. *Associate Professor of Physiology*
M.B., National Taiwan, 1954; Ph.D., Columbia, 1957
- Louis J. Cizek. *Associate Professor of Physiology*
B.S., Fordham, 1937; M.D., Columbia, 1941
- Robert J. Dellenback. *Assistant Professor of Physiology*
A.B., California (Los Angeles), 1950; M.A., 1953; Ph.D., 1955
- Raimond Emmers. *Assistant Professor of Physiology*
A.B., East Texas Baptist, 1953; M.A., North Carolina, 1955; Ph.D., Syracuse, 1958
- Elizabeth C. Gerst. *Assistant Professor of Physiology*
A.B., Mount Holyoke, 1951; Ph.D., Pennsylvania, 1957
- Arnold M. Katz. *Assistant Professor of Physiology*
A.B., Chicago, 1952; M.D., Harvard, 1956
- Werner R. Loewenstein. *Associate Professor of Physiology*
B.A., Chile, 1945; D.M.D., Chile, 1950
- Richard C. Mason. *Assistant Professor of Physiology*
A.B., Indiana, 1948; Ph.D., 1952
- William L. Nastuk. *Professor of Physiology*
B.S., Rutgers, 1939; Ph.D., 1945
- Mero Nocenti. *Assistant Professor of Physiology*
A.B., West Virginia, 1951; M.S., 1952; Ph.D., Rutgers, 1955
- Walter S. Root. *Professor of Physiology*
B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- John V. Taggart. *Professor of Physiology*
M.D., Southern California, 1940
- William W. Walcott. *Associate Professor of Physiology*
A.B., Yale, 1933; Ph.D., Columbia, 1944

PREVENTIVE AND ADMINISTRATIVE MEDICINE

CHAIRMAN: Ray E. Trussell

Ray E. Trussell. *Joseph R. Delamar Professor of Administrative Medicine*
 A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947

BIOSTATISTICS

John W. Fertig. *Professor of Biostatistics*
 A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

PUBLIC HEALTH PRACTICE

Arthur Bushel. *Adjunct Associate Professor of Dental Public Health Practice*
 A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947

PSYCHIATRY

CHAIRMAN: Professor Lawrence C. Kolb

James P. Cattell. *Assistant Clinical Professor of Psychiatry*
 A.B., Miami, 1938; M.D., Harvard, 1942

Lawrence C. Kolb. *Professor of Psychiatry*
 M.D., Johns Hopkins, 1934

ASSOCIATES

Helen M. Anderson, M.D.
(Medicine)
 Melvin N. Blake, D.D.S.
(Pathology)
 John S. Britten, M.D.
(Physiology)
 Wendell B. Hatfield, M.D.
(Medicine)
 Donald A. Holub, M.D.
(Medicine)
 George A. Hyman, M.D.
(Medicine)
 Frederick A. Klipstein, M.D.
(Medicine)
 Hans W. Neuberg, M.D.
(Medicine)
 David G. Simpson, M.D.
(Medicine)

RESEARCH ASSOCIATES

Harry S. Kessler, D.D.S.
(Microbiology)
 Herbert F. Silvers, D.D.S.

INSTRUCTORS

Mark L. Benes, D.D.S.
 Gerald H. Besen, D.D.S.
 Martin Blank, Ph.D.
(Physiology)
 Marc L. Berg, D.D.S.
 Charles L. Berman, D.D.S.
 David Blistein, D.D.S.
 Morton S. Brod, D.D.S.
 Alvin D. Cederbaum, D.D.S.
 Salvatore A. Cordaro, D.D.S.
 Joseph A. De Julia, D.D.S.
 Marvin Firdman, D.D.S.
 P. Charles Gabriele, D.D.S.
 Herman Gladstone, M.D.
(Anatomy)
 Benjamin W. Glick, M.D.
(Anatomy)
 Monroe M. Gliedman, D.D.S.
 Richard Gliedman, D.D.S.
 Elliott J. Gordon, D.D.S.
 Albert Green, D.D.S.
 Saul N. Greenberg, D.D.S.
 William Greenfield, D.D.S.

INSTRUCTORS (*continued*)

Stanley S. Heller, D.D.S.
 David Hendell, D.D.S.
 Robert J. Huettner, D.D.S.
 Norman Kahn, D.D.S.
 (*Pharmacology*)
 Jacob I. Kaplan, D.D.S.
 Frances R. Karlan, D.D.S.
 Edward P. Kesseler, D.D.S.
 Marvin B. King, D.D.S.
 George Kiriakopoulos, D.D.S.
 Philip Kutner, D.D.S.
 Gustave Lasoff, D.D.S.
 Henry P. Levy, D.D.S.
 (*Anatomy*)
 Julius G. Littman, M.D.
 (*Anatomy*)
 Richard J. Lowell, D.D.S.
 George V. Lyons, D.D.S.
 Eugene F. Murphy, D.D.S.
 Herbert I. Oshrain, D.D.S.
 Anthony M. Perks, Ph.D.
 (*Pharmacology*)
 Arnold Rosenberg, D.D.S.
 Albert Salkind, D.D.S.
 Bert B. Schoeneman, D.D.S.
 Murray Schwartz, D.D.S.
 Boaz Shattan, D.D.S.
 Alvin L. Solomon, D.D.S.
 Stanley M. Steinerman, D.D.S.
 Morton Jay Stern, D.D.S.
 Bernard Telsey, D.D.S.
 Russell J. Vanacek, D.D.S.
 Edward C. Vollmer, D.D.S.
 Merwin Wolf, D.D.S.
 Issacher Yavelow, D.D.S.
 Raymond F. Zambito, D.D.S.
 Edward Zerden, D.D.S.

ASSISTANTS

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 Abraham M. Blechman, D.D.S.
 Howard I. Blum, D.D.S.
 Robert J. Blum, D.D.S.
 Roy Boelstler, D.D.S.
 James T. Botwick, D.D.S.
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 Murray A. Cantor, D.D.S.

ASSISTANTS (*continued*)

Jack E. Chachkes, D.D.S.
 James G. Coyle, D.D.S.
 Anthony L. Di Mango, D.D.S.
 William A. Dwyer, Jr., D.D.S.
 Bernard S. Fahn, D.D.S.
 Russell R. Garofalo, D.D.S.
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 Merrill K. Gellis, D.D.S.
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 Dale E. Hopp, D.D.S.
 Irving A. Karel, D.D.S.
 Ralph Kaslick, D.D.S.
 Eugene P. La Sota, D.D.S.
 Kenneth D. Levin, D.D.S.
 Paul L. Lyons, D.D.S.
 Joseph Marbach, D.D.S.
 Michael Z. Marder, D.D.S.
 Milton P. Merritt, D.D.S.
 Frank Miele, D.D.S.
 S. Abel Moreinis, D.D.S.
 Ronald B. Odrich, D.D.S.
 Joseph Pomerantz, D.D.S.
 Milton Potters, D.D.S.
 Norman M. Roland, D.D.S.
 Samuel Rosen, D.D.S.
 George Rudensky, D.D.S.
 John M. Scarola, D.D.S.
 Robert N. Schiff, D.D.S.
 Morton R. Schoenberg, D.D.S.
 Daniel D. Schube, D.D.S.
 Alexander B. Smith, D.D.S.
 Irwin Steuer, D.D.S.
 Justin H. Stone, D.D.S.
 Ronald Tenore, D.D.S.
 Howard B. Vogel, D.D.S.
 Burton Weidman, D.D.S.
 Ephraim Weinstein, D.D.S.
 Roy A. Wilko, D.D.S.
 David H. Wolmer, D.D.S.
 Stephen Wotman, D.D.S.
 Albert Zengo, D.D.S.

LECTURERS

Rudolph P. Bircher, M.D.
 (*Pharmacology*)
 Bernard S. Chaikin, D.M.D.
 Robert M. Cole, D.D.S.

LECTURERS (*continued*)

Robert L. Fisher, D.D.S.
 Joseph E. Johnson, D.D.S.
 Saul Misheloff, D.D.S.
 Bissell B. Palmer, D.D.S.
 (*Public Health*)
 Arnold C. Rosenberg, D.D.S.
 Jurg A. Schneider, M.D.
 (*Pharmacology*)

CURATOR OF THE MUSEUM

Curt Proskauer, D.M.D.

RESEARCH ASSISTANTS

Linda Green, B.S.
 Solomon L. Katz, D.D.S.
 Hans H. Neumann, M.D.

► PRESBYTERIAN HOSPITAL DENTAL SERVICE

DIRECTOR: Gilbert P. Smith

CONSULTANTS: Bion R. East, Houghton Holliday, Carl R. Oman, Joseph Schroff, Albin R. Seidel

DIAGNOSTIC SERVICE: Edward V. Zegarelli, *attending dental surgeon*; Joseph A. Cuttita, *associate attending dental surgeon*; Jack Budowsky, Austin H. Kutscher, and Laszlo Schwartz, *assistant attending dental surgeons*

ORAL SURGERY SERVICE: Rudolph H. Friedrich and William J. Savoy, *attending dental surgeons*; Lester R. Cahn, *associate attending dental surgeon (surgical pathology)*; Kourken A. Daglian and Boaz Shattan, *assistant attending dental surgeons*

PEDODONTIC SERVICE: Solomon N. Rosenstein, *attending dental surgeon*

RESTORATIVE DENTAL SERVICE: Gilbert P. Smith, *attending dental surgeon*; Sebastian A. Bruno, *assistant attending dental surgeon*

Academic Calendar, 1964-1965

- Sept 8-9** Tuesday-Wednesday. Registration, including payment of fees. Later registration requires payment of a late fee.
- 10** Thursday. Freshman Orientation Day.
- 14** **Monday. Classes begin.**
- Nov 3** Tuesday. Election Day. Holiday.
- 26** Thursday. Thanksgiving Day. Holiday.
- 28** Saturday. First trimester ends.
- 30** Monday. Second trimester begins.
- Dec 20** **Sunday, through January 3, 1965, Sunday. Christmas Holidays.**
- Feb 22** Monday. Washington's Birthday. Holiday.
- 26** Friday. Second trimester ends.
- Mar 1** Monday. Third trimester begins. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June. Later filing of application requires payment of a late fee.
- Apr 11** **Sunday, through April 18, Sunday. Spring Holidays.**
- May 3** Monday. Last day for filing *late* application for June degrees.
- 21** Friday. Third trimester ends for the second- and fourth-year classes.
- 24-28** Monday-Friday. Final examinations.
- 28** Friday. Third trimester ends for the first-year class.
- 31** Monday. Memorial Day. Holiday.
- June 1** **Tuesday. Award of degrees and certificates.**
Beginning of Summer Clinic for the third-year class.
- July 5** Monday. Independence Day Holiday (third-year students).
- 30** Friday. ~~Summer~~ Clinic ends for the third-year class.



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THE COLUMBIA-PRESBYTERIAN MEDICAL CENTER NEW YORK CITY



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| 1. BARD HALL | 10. N.Y. CITY DEPARTMENT OF HEALTH |
| 2. N.Y. STATE PSYCHIATRIC INSTITUTE | SCHOOL OF PUBLIC HEALTH AND |
| PSYCHOANALYTIC CLINIC | ADMINISTRATIVE MEDICINE |
| 3. NEUROLOGICAL INSTITUTE | INSTITUTE OF NUTRITION SCIENCES |
| 4. MAXWELL HALL | 11. HARKNESS PAVILION |
| 5. HARKNESS MEMORIAL HALL | 12. PRESBYTERIAN HOSPITAL |
| 6. WILLIAM BLACK RESEARCH BUILDING | N.Y. ORTHOPAEDIC HOSPITAL |
| (UNDER CONSTRUCTION) | SLOANE HOSPITAL |
| 7. ALUMNI AUDITORIUM | SQUIER UROLOGICAL CLINIC |
| (UNDER CONSTRUCTION) | 13. BABIES HOSPITAL |
| 8. COLLEGE OF PHYSICIANS AND | 14. PAULINE A. HARTFORD MEMORIAL |
| SURGEONS | CHAPEL |
| 9. VANDERBILT CLINIC | 15. INSTITUTE OF OPHTHALMOLOGY |
| SCHOOL OF DENTAL AND ORAL | 16. CENTRAL SERVICE BUILDING |
| SURGERY | 17. FRANCIS DELAFIELD HOSPITAL, N.Y.C. |

To Reach the Medical Center: By subway, the Washington Heights Express of the IND Eighth Avenue or the Van Cortland Park train of the IRT Seventh Avenue. By bus, Fifth Avenue Bus #4 or #5. By car, the Westside Highway exit at the George Washington Bridge. Parking facilities are available at West 164th Street and Fort Washington Avenue.

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